Acute2 manual Profoto, Stockholm, Sweden.

Warning

Profoto generators and lamp heads are parts of a complete professional lighting system. Please read the instruction manual carefully before use. Flash tubes and modelling lamps emit considerable heat and may cause injury if not handled properly.

Note, always unplug the lamp cable from the generator before changing the modelling lamp or flash tube.

- Under no circumstances are generators or heads to be opened. High voltage is inside the equipment.
- Do not touch hot metal parts.
- Do not obstruct ventilation
- Do not connect flash heads with the protective cap in place

When using the flash, do not place filters, diffusing materials, or any other obstructions directly onto the glass cover, flash tube or modelling lamp.

Never position the light extremely close to people.

When mounting umbrellas, do not touch the flash tube or modelling lamp with the metal shaft – risk of high voltage.

Never connect accessories of other brands without consulting an authorised service station.

Service only to be performed by an authorised repair station!

Always use a grounded mains outlet.

Note! Under no circumstances is any part of the equipment to be opened! The equipment is not user-serviceable and there is dangerous high voltage inside!

Contents

Thanks! 4

The Acute2 System Chart 6

Acute2 head 8

Acute2 twin 9

The flash heads 10

Acute2 head 11

Acute2 twin 12

Acute2 ring 13

Nomenclature 14

Brief instructions 15

Energy distribution 17

Energy distribution Acute2 twin 20

Energy control 21

Gas generator 24

Troubleshooting guide 26

Technical data 27

The Acute2 system consists of the following products:

Generators:Acute2 1200, Acute2 2400

Heads: Acute2 head, Acute2 twin, Acute2 ring

All Profoto reflectors and accessories fit the Acute2 system.

Thanks!

Thanks for showing us your confidence by investing in an Acute2 system. For more than three decades we have sought the perfect light. What pushes us is the conviction that we can offer even the most demanding photographer yet better tools.

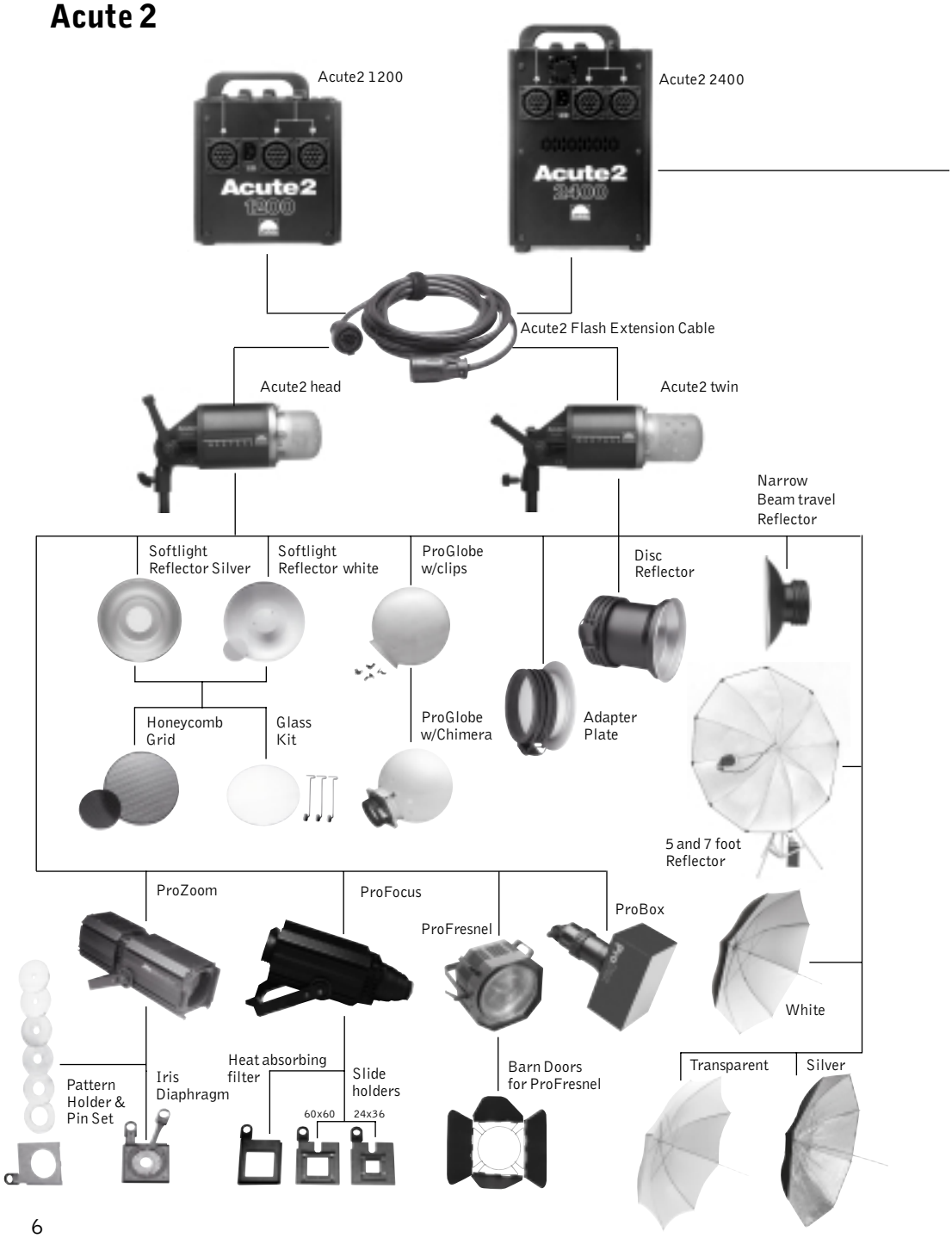
Before our products are shipped we have them pass an extensive and strict testing program. We check that they pass the quality and capacity levels the most demanding photographers require. For this reason our flash equipment is the standard in most rental studios in New York and Tokyo and the most rented flash all over the world. The system consists of a variety of generators built and designed to meet the demands of the most demanding photographers on this planet. Yet the most important thing is the light you create and it is then essential that the system offers freedom to create your own light. The Acute2 heads in particular offer you this possibility . The light source, both the flash tube and the modelling light, is placed high and free in the flash head. This makes it easier for you to adjust the light and use your creativity. The reflectors are moveable and lock easily into place. By moving the position of the reflector you can get a higher or lower concentration of light in the center or more of a flood light. This is not new, of course. Our flash heads have always been designed that way. What is new, however, is our new glass cover, which is designed to increase precision. The Acute2 head and the Acute2 twin are supplied with a frosted and UV-coated cover glass, which together with the flash tube, produce a colour temperature adapted to daylight colour film. There are glass covers with varying filtration, for greater diversity.

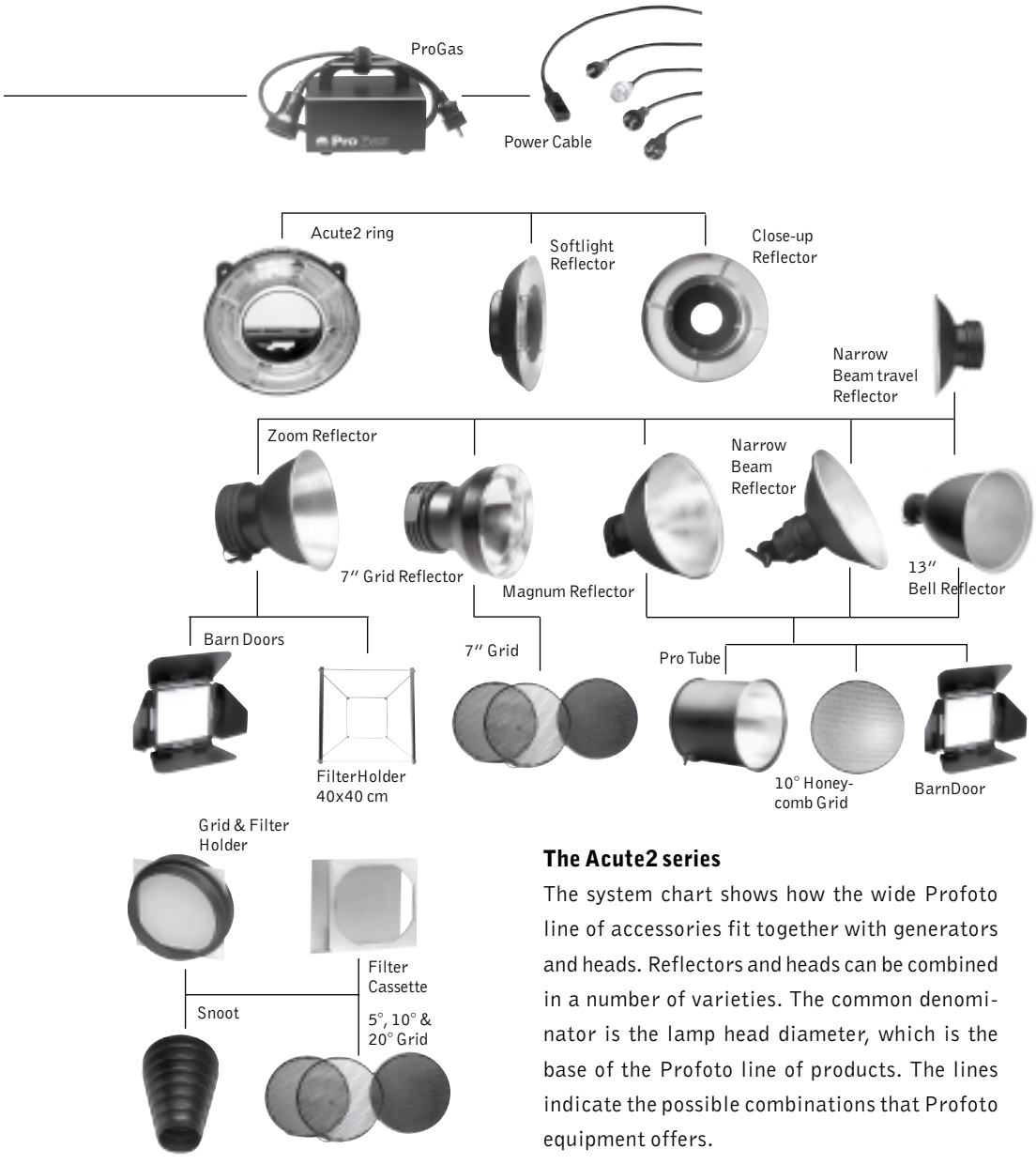
The whole Acute2 system is modular. Every single reflector and accessory creates its special light and the unique Profoto focusing system offers you a possibility to create your own light with only a few different reflectors.

Profotos founders Eckhard Heine och Conny Dufgran,
At ''Photokina'',Cologne, Germany 1968

''A photographer's tools are a natural part of the creative process. Like a painter's brush, an artist's chisel or a musician's instrument, their form and design should reflect their function, they should have the right feel, and they should be aesthetically pleasing''.

Acute 2


Acute2 1200
Acute2 2400
Acute2 Flash Extension Cable
Acute2 head
Acute2 twin
Narrow Beam travel Reflector
Softlight Reflector Silver
Softlight Reflector white
ProGlobe w/clips
Disc Reflector
Honeycomb Grid
Glass Kit
ProGlobe w/Chimera
Adapter Plate
5 and 7 foot Reflector
ProZoom
ProFocus
ProFresnel
ProBox
White
Pattern Holder & Pin Set
Iris Diaphragm
Heat absorbing filter
Slide holders
60x60
24x36
Barn Doors for ProFresnel
Transparent
Silver

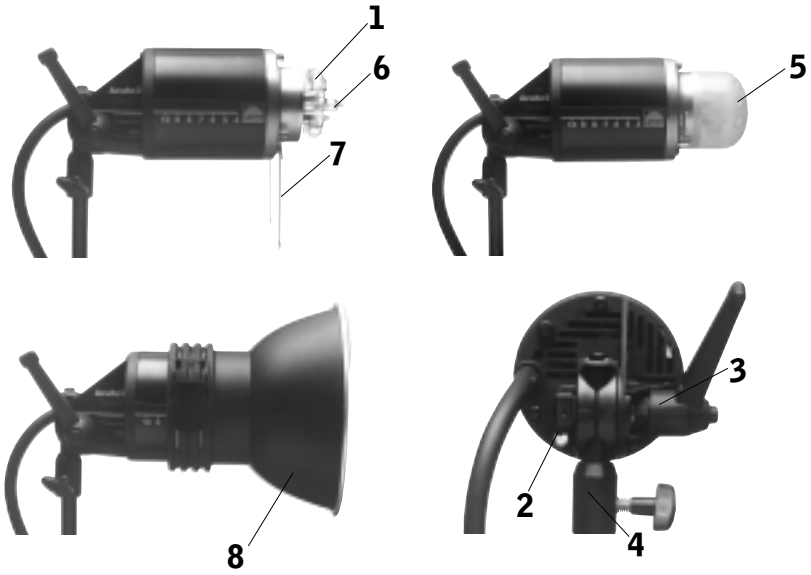


The Acute2 series

The system chart shows how the wide Profoto line of accessories fit together with generators and heads. Reflectors and heads can be combined in a number of varieties. The common denominator is the lamp head diameter, which is the base of the Profoto line of products. The lines indicate the possible combinations that Profoto equipment offers.

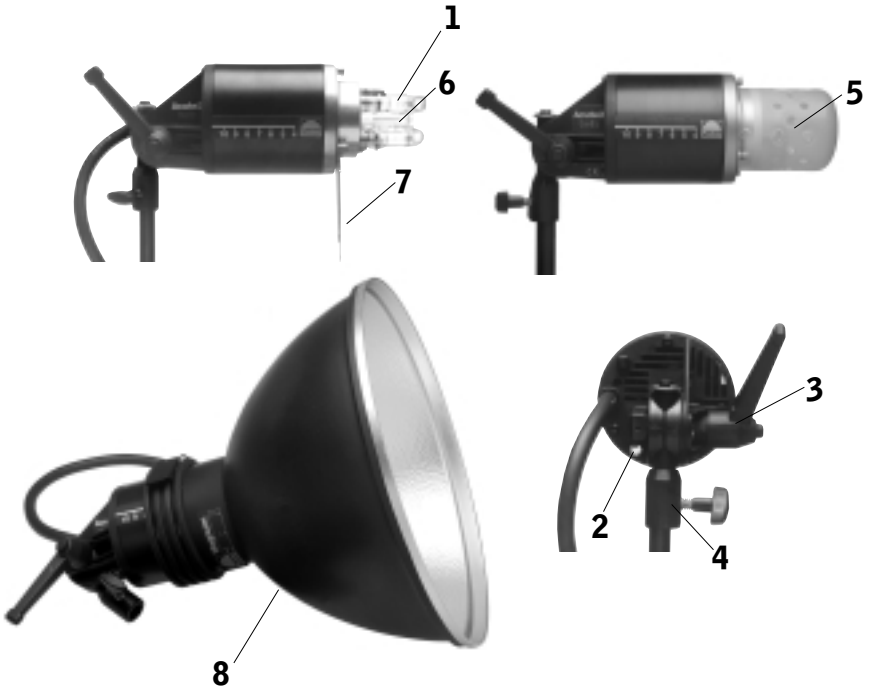
Acute2 head

1. UV reduced flash tube
2. Umbrella holder
3. Manoeuvre system with locking lever
4. Stand adapter 16mm (5/8")
5. Acute2 Glass Cover, frosted, UV-coated
6. Halogen modelling lamp, 250W, Mini-can E11 socket
7. Locking springs
8. Zoom reflector



Acute2 twin

1. UV reduced flash tubes
2. Umbrella holder
3. Manoeuvre system with locking lever
4. Stand adapter 16mm (5/8")
5. PB/Twin Glass Cover , frosted, UV-coated
6. Halogen modelling lamp, 500W, Mini-can E11 socket
7. Locking springs
8. Magnum Reflector



The flash heads

All Profoto lamp heads are designed for maximum light shaping purposes. The light source (both the flash tube and the modelling lamp) is mounted high and free in the flash head. This makes it easier for you to adjust the light and use your creativity. The flash head has a built in holder for the umbrella.

The reflectors lock easily into place and by moving the reflector different types of light shaping is achieved. All Profoto reflectors and accessories fit the Acute2 heads.

A UV-reduced quartz flash tube is included with all Acute2 heads. The flash tube has two metal pins. When removing a flash tube, pull it straight out of the sockets. When inserting a new flash tube, check that the trigger wire clasps properly around the flash tube (please see mounting instructions in package).

In case the head overheats the modelling light automatically switches off. When the temperature has dropped sufficiently the modelling light will switch on again.

NOTE!

Always unplug the lamp cable from the generator before changing modelling lamp or flash tube.

Acute2 head

The Acute2 head is fan cooled and it has an automatic voltage selector for the fan. The dimmer controlled modelling light is powered directly from the mains and it is therefore important to check that the rated voltage for the lamp corresponds with the mains supply. A 250 W E11 Mini-can halogen lamp is included in standard deliveries. The Acute2 head is supplied with a frosted UV-coated glass cover and a Zoom reflector. Combined with the UV-reducing quartz flash tube the frosted glass cover offers the recommended colour temperature for daylight type film. Distinctive colour temperature adjustments can be obtained by combining glass covers with different coatings. The following glass covers are available:

10 15 33	Glass Cover, frosted, UV-coated (standard)
10 15 35	Glass Cover, frosted, extra UV-coated, -300°K
10 15 34	Glass Cover, frosted, uncoated
10 15 37	Glass Cover, clear, UV-coated
10 15 39	Glass Cover, clear, extra UV-coated, -600°K
10 15 36	Glass Cover, clear, uncoated
10 20 02	250W, 120V Halogoen, Mini-Can
10 20 13	250W, 240V Halogen, Mini-Can

Acute2 twin

The Acute2 twin is used to obtain even shorter flash duration, very quick recycling or to fire 4800 Ws out of one single head.
An Acute2 twin has two flash tubes. As the flash duration is shorter at low power switch settings, and as only half of the desired power is used in each tube, consequently shorter flash duration is obtained.
If you require shorter flash duration and you for example need 1200 Ws, you connect the Acute2 twin to the B sockets on the Acute2 1200 generator and fire 600 Ws from each tube. The flash duration is shorter than if a standard Acute2 head is used. The flash duration at 1200 Ws with an Acute2 head is 1/560 while it is only 1/1000 with an Acute2 twin.
If, on the contrary, you require faster recycling, you power the Acute2 twin with 2 Acute2 generators. The recycling is faster since each generator need to recharge less energy.
To get 4800 Ws from one head you connect the Acute2 twin to two Acute2 2400 generators.
Flash duration and recycling for an Acute2 twin at a certain power setting - for example 1200 Ws - compares with a Acute2 head powered with 600 Ws.
Since the modelling light is powered from the mains supply it is important to check that the rated voltage for the modelling lamp corresponds with the mains supply.
The modelling light is a 500W Halogen with a Mini-can socket (E11). The flash tube has two metal pins. When removing a flash tube, pull it straight out of the sockets. When inserting a new flash tube, check that the trigger wire clasps properly around the flash tube (please see mounting instructions in package).

10 15 18	Glass Cover, frosted, UV-coated (standard)
10 15 19	Glass Cover, frosted, extra UV-coated, -300 gr K
10 15 20	Glass Cover, frosted, uncoated
10 15 21	Glass Cover, clear, UV-coated
10 20 07	500W, 120V, Halogen, Mini-can
10 20 15	500W, 240V, Halogen, Mini-can

Acute2 ring

The Acute2 ring is an entirely mobile source of light. The interior diameter of 100mm provides plenty of space for professional camera lenses. Since the camera holder can be tilted forward and backwards, as well as upwards and downwards, most cameras can be attached. The Acute 2 ring gives a shadowless light and it makes an excellent source of light in cramped areas, such as the interior of an automobile. Many fashion photographers also use the Acute 2 ring to find new angles and capture details. The ring flash provides a very distinct, directed light, but can be complemented by a soft light reflector, which increases the light source, thereby producing a soft light with little shadow.
For close-ups, there is a reflector that focuses the light 50 cm in front of the camera lens.
The maximum charge is 9600 Ws/minute. This means 4 flashes a minute at 2400 Ws, 8 flashes at 1200 Ws, 16 flashes at 600 Ws, etc.
Changing flash tube is only to be done at a professional service station.

Mounting the reflector:

- Remove the two ridged screws fixating the camera holder.
- Remove the four ridged nuts holding the outer and inner reflectors together.
- Run the lamp cable through the outer reflector and let the reflector slide into position.
- Reassemble the outer and inner reflectors using the ridged nuts.
- Reassemble the camera holder using the two ridged screws.

10 06 42 Softlight Reflector Ring
10 06 43 Close-Up Reflector Ring

Nomenclature

1. Power On/Off
2. Modelling Light Dimmer for Group A
3. Modelling Light Dimmer for Group B
4. Modelling Light Control Max/Dim/Off
5. Ready Lamp & Test Button
6. Fast/Slow Recharging and Amp. draw Button
7. Voltage Selector Mains Supply
8. Mains Frequency Selector
9. Sound Switch
10. Slave (Photocell) Switch On/Off
11. Photocell and IR
12. A-Switch
13. A+B/A<->B Switch
14. B-switch
15. Bracket Dial
16. Sync Input

17. Flash head socket (group A)

18. Mains connection

19. Flash head socket(group B)

20. Flash head socket(group B)

Brief instructions

- Check that the voltage you have selected on generator corresponds with the mains supply voltage
- Check that the modelling lamp has the correct voltage
- Connect flash head/s
- Connect the mains supply cable
- Choose recycling time
- Switch on the POWER
- Switch on modelling light (MOD. LIGHT)
- Choose energy distribution
- Adjust the modelling light
- Press the ready lamp/test button for flash
- Connect sync cable

Warning!

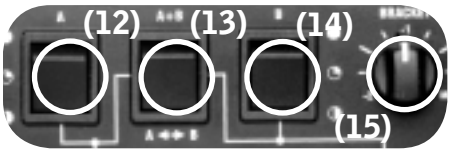
Never use ordinary household extension cords to extend the length of the power cable. They may overheat. Contact your Profoto distributor for proper equipment.

Connecting lamp heads

One, two or three lamp heads can be connected to the sockets marked A, B and B (15). When connecting the lamp plug, align the white dots on the plug with the white dot on the generator panel. Secure by turning the locking ring on the plug clockwise.

Energy distribution

The energy can be controlled over a 6 f-stop range or 7 when using 2 heads connected to the B sockets. The energy output through the outlets A (17) and B (19,20) is controlled by the A+B / A<->B switch (13), the



switches A and B (12+14) and the dial BRACKET (15).

The nominal energy of the flash unit is divided equally into two groups, A and B, and the two groups can either be combined or separated with the A+B / A<->B switch (13).

The energy in group A is controlled by the A-switch (12) and the energy in group B is controlled by the B-switch (14).

In each group the energy can be halved or quartered.
Please see panel for details.

Below you will find detailed description on how to control the energy if you use one, two or three Acute2 heads or if you use a Acute2 twin.
Always start with settin g the BRACKET dial(15) to max, the A- and B switch at full and the A+B / A<->B switch (13) in position A+B. You now have maximum energy.
Full f-stop changes are done with the A- or/and B-switch.
Fine adjustments or further f-stop reductions are done with the BRACKET dial.

Energy distribution

One head

1. Connect the head to socket A.
2. Reduce the energy one f-stop by switching A+B / A<->B switch to position A<->B.
3. Further reduce the energy one or two f-stops by halving or quartering the energy with the A-switch.
4. Use the dial BRACKET for fine adjustments and to further reduce the energy by two f-stops.

Two heads

Symmetrical light distribution

1. Connect the two heads to the B sockets.
2. Reduce the energy one f-stop by switching A+B / A<-> B switch to position A<->B.
3. Further reduce the energy one or two f-stops by halving or quartering the energy with the B-switch.
4. Use the dial BRACKET for fine adjustments and to further reduce the energy by two f-stops.

Asymmetrical light distribution

1. Connect one head to the A socket and one head to one of the B sockets.
2. Set the A+B / A <-> B switch in position A<->B. The energy for the two heads is now individually controlled.
3. Reduce the energy one or two f-stops by halving or quartering the energy with the A-switch for the head connected to the A-socket.

4. Use the dial BRACKET for fine adjustments and to further reduce the energy by two f-stops.

Three heads

Symmetrical light distribution

1. Connect one head to each socket
2. Set the A+B / A<->B switch in position A+B. The energy for the two groups is now added and then equally divided between the connected heads.
3. Reduce the light output by reducing the energy with A- and B-switch.
5. Use the dial BRACKET for fine adjustments and to further reduce the energy by two f-stops.

Asymmetrical light distribution

1. Connect one head to each socket
2. Set the A+B / A<->B switch in position A<-> B. The energy for the two groups is now individually controlled.
3. Reduce the energy for the head connected to socket A by one or two f-stops by halving or quartering the energy with the A-switch.
4. Reduce the energy for the heads connected to sockets B by one or two f-stops by halving or quartering the energy with the B-switch. The energy in group B is equally divided between the two heads.
5. Use the dial BRACKET for fine adjustments and to further reduce the energy by two f-stops.

Energy distribution Acute2 twin

One generator

1. Connect the head sockets to the two B sockets on the generator.
2. Reduce the energy one f-stop by switching A+B / A<->B switch to position A<->B.
3. Further reduce the energy one or two f-stops by halving or quartering the energy with the B-switch.
4. Use the dial BRACKET for fine adjustments and to further reduce the energy by two f-stops.

Two generators

1. Connect the head socket to socket A on each generator.
2. Reduce the energy one f-stop by switching A+B / A<-> B switch to position A<-> B on both generators.
3. Further reduce the energy one or two f-stops by halving or quartering the energy with the A-switch on both generators.
4. Use the dial BRACKET for fine adjustments and to further reduce the energy by two f-stops on both generators.

Energy Control

With the dial BRACKET (15) the total energy can, irrespective of the energy distribution, be reduced to 1/4, i.e. two f-stops. The flash duration, recycling and colour temperature is affected by using the dial BRACKET. When using the bracketing dial (15) to reduce the energy you need to dump excess energy by pushing down the test button (5). To obtain the shortest possible flash duration use the position max and reduce energy by using the energy switches.

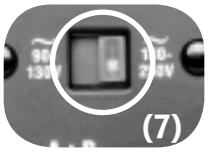
Bracketing

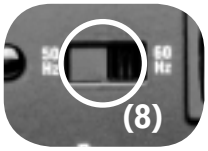
The BRACKET DIAL can also be used to obtain alternative exposures - "bracketing".

1. Turn the dial to -1. Find your correct f-stop with your flash meter. Make the first exposure.
2. Turn the dial to max. The power increases to an overexposure of one f-stop . Make the second exposure.
3. Turn the dial to -2 energy. Press the test button (5). After recharging the power is decreased to an underexposure of one f-stop.
4. Now make the third exposure.

This procedure results in three different exposures. One is "correct", one is overexposed by one f-stop and one is underexposed by one f-stop. There are three different exposures without any change in lighting or depth of field.

It is of course possible to choose only1/4 or 1/2 of an f-stop "bracketing". The distance between marks is 1/4 of an f-stop.





Charging and recycling

Check that the voltage selector (7) and the frequency - selector(8) matches the mains supply voltage. Turn on the main switch POWER (1).

The recycling time is very short. Variations may occur depending on the selected flash energy and the mains power supply. The shortest recycling time is obtained with low flash energy selected with the A-, B- and A+B / A<->B-switches and the BRACKET (15) dial.

Flash duration

The shortest flash duration is obtained by using an Acute2 twin connected to the B sockets, the BRACKET dial set to 1/1, the A+B/A<->B switch to the A<->B position and the B switch set at 1/4.

Photo Cell

The built-in photo cell (11) will sense flash release as well as IR-signals from most IR-transmitters. The photocell is turned off with the switch SLAVE (10).

Ready lamp/test button

The ready lamp button TEST (5) has two functions. First, it lights up when the unit is fully recycled. Second, it can be used to manually sync the unit. When you have chosen a lower energy setting with the dial BRACKET (15), release a flash and the unit will recycle for the new energy setting.

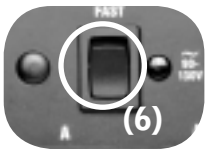
Connecting Camera and Flash meter

Synchronise by connecting the sync cable from the camera or flash meter to the sync socket (16).

The 5 metre sync cord can without restrictions be elongated with a sync extension cable.

Sound signal

The acoustic signal "beeps" when the unit is fully recycled. The signal can be turned on/off with the SOUND switch (9)



Recycling Time

With the button fast/slow (6) the recycling time can be adjusted to slow to preserve weak fuses or heavily loaded mains supplies. Slow recycling puts less pressure on fuses.

Modelling Light Control

With the mod. light switch (4) select the desired mode of operation if you want maximum mod. light , mod.light off or a possibility of dimming the mod. light in order to receive a proportional mod. light. To dim the dim. light use the Mod A(2) dial to control the head connected to group A(17) and the Mod B(3) dial for the head(s) connected to group B(19, 20).

Automatic Safety Function

If the unit is under intensive use with frequent flashing for an extreme long period of time, the recycling will stop completely. This is to prevent the unit from overheating and is indicated by a red light in the photocell(11)

The overheat protection in the Acute2 head turns off the modelling light when the head is overheated. The protection functions are automatically reset when the temperature is lowered.

Protection from wrongly set mains voltage selector switch inhibits charging for 5 seconds and shuts off if wrongly set.

For quality reasons, the first charging cycle is longer than the following.

Gas generator

Most gas generators with an output of 2000W or more can operate an Acute2 generator. Please note that you must use a ProGas2 unit between the gas generator and the Acute2 generator to prevent damage to these two units if the gas generator operates at 230V. For more detailed information please see below or contact your local Profoto dealer. With a gas generator with an output of 3000W or more 2 Acute2 generators can be operated.

A. Make sure the petrol-electric generator set produces at least 2000W continuous output power for each connected unit. Always check this figure against the data sheet, as the model number does not always reflect the true power output. NOTE: Generators less powerful than 2000W should never be used.

B. Use one 'ProGas2' (order no. 10 02 17) for each connected Acute 2 flash unit, if a 220-240V petrol-electric generator set is being used. The 'ProGas2' is designed to protect your Acute2 flash unit from damaging voltage fluctuations, which may occur when a 220-240V petrol-electric generator set is used. The 'ProGas2' should be connected between the 220-240V petrol-electric generator set and the flash unit. NOTE: It is not necessary to use the 'ProGas2' with a 117V generator set.

Warranty

All Profoto products are guaranteed for a period of 2 years, with the exception of flash tubes, glass covers and modelling lamps.

Reliability Testing – The R-test

The Profoto R-test guarantees that all products leaving the factory meet the very high standards required of professional equipment by professional photographers. The R-test is a rigorous performance test that Profoto generators are put through – 360 full power flashes are released during one hour, which is equivalent to 10 rolls of 35 mm film.

After the test the equipment is examined to see that all parts have kept a normal operating temperature and are not malfunctioning in any way. All Profoto products are subjected to the R-test prior to being shipped.

Troubleshooting Guide

Problem	Action
• No ready lamp but ready sound	• Change ready lamp
• No flash	• Check flash tube
• Fuses keep blowing	• Reduce recycling speed
• Continuous red light in Photocell	• Generator is overheated
• Generator works badly or shuts off after a few seconds	• Check voltage settings on generator.
• Slow recharging /recycling	• Low mains voltage? - Reduce the BRACKET(15)
• Flashing red light in Photocell	• Indicates slow recycling setting
• Bad mains quality?	• Check setting of recycling time

Technical data

Recycling time, sec

Mains voltage	Acute2 1200	Acute2 2400
240V 50 Hz	0.09-1.6 s	0.18-3.2 s
100V 50 Hz	0.12-2.7 s	0.24-5.1 s
117V 60 Hz	0.09-1.5 s	0.17-2.9 s

Duration and recycling data are approximate and may differ slightly between units due to component variations

Size (height x length x width)

2400Ws	13x19x30cm (5.1x7.5x11.8in) incl. Handle
1200Ws	13x19x22cm (5.1x7.5x8.7in) incl. Handle

Weight

2400Ws	5.9kg (12.9 lb)
1200Ws	4.1kg (9.0 lb)

Max Modelling lamp

500W and 1000W per generator

Technical data

Guide no. In meter/feet at 100 ASA

	Acute2 1200	Acute2 2400
Magnum reflector 50 degree.	128/420	180/592
Zoom reflector	64/210	90/295
Umbrella	32,5/126	45,5/180

Power requirements

- 90-130 VAC, 50 or 60 Hz. 15 Amps recommended for 2 units.
- 180-250 VAC, 50 or 60 Hz. 10 Amps recommended for 2 units.
- Gasoline generators, see guidelines on page 24

(minimum 2000W true output per flash unit). Charge speed set at Max.

Flash duration (t0.5), one head

	t0,5 [1/100 s]		
	Acute2 1200/2400		
	Acute2 head		
Energy [Ws]	**Acute2 1200**	**Acute2 2400**	**Acute2 twin**
4800	n/a	n/a	n/a /320
2400	n/a	320	560
1200	560	560	1000
600	1000	1000	1800
300	1800	1800	3200/1800
150	3200	1800	3200/1800
75	3200	1800	3200/1800
37,5	3200	n/a	3200/ n/a

Posh Produktion www.posh.se Photos by: Jan Fridlund

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Article no. 33 40 06

Product codes, descriptions and included components may vary from market to market around the world. Please consult your importer for specific information.